IN-HOSPITAL MORTALITY AND 30-DAY READMISSIONS IN MYELOPROLIFERATIVE NEOPLASM PATIENTS HOSPITALIZED WITH NSTEMI: A NATIONWIDE ANALYSIS STRATIFIED BY REVASCULARIZATION STRATEGY

SOHO ANNUAL MEETING 2026

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INTRODUCTION

Myeloproliferative neoplasms (MPNs) are associated with chronic inflammation, platelet dysfunction, and heightened thrombotic risk, yet outcomes of different revascularization strategies in MPN patients with non-ST elevation myocardial infarction (NSTEMI) remain poorly defined.

AIM

To evaluate in-hospital mortality and 30-day all-cause readmission among patients with MPNs hospitalized with NSTEMI, stratified by revascularization strategy (PCI, CABG, or no revascularization).

METHOD

Study Design: Retrospective cohort study using the Nationwide Readmissions Database (NRD), 2016–2022.

Study Population: Patients with MPNs hospitalized with NSTEMI.

Study Groups: Patients were stratified by revascularization strategy into PCI, CABG, or no revascularization.

Exclusion Criteria: AGE<18, COVID-19 infection, elective admissions, and missing key variables.

Primary Outcomes: In-hospital mortality and 30-day all-cause readmission among survivors.

Statistical Analysis: Multivariable logistic regression was used to assess in-hospital mortality, and Cox proportional hazards regression was used to evaluate 30-day readmission.

CONCLUSIONS

Among MPN patients hospitalized with NSTEMI, PCI was associated with lower in-hospital mortality and reduced 30-day readmission risk compared with no revascularization, though patients managed conservatively were older with greater comorbidity burden. Further studies are needed to define optimal treatment strategies in this population.

RESULTS

Of all **7,249** MPN patients admitted with NSTEMI

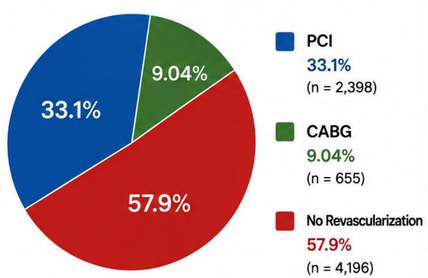
PATIENT CHARACTERISTICS

- **53.1%** Male
- **46.9%** Female
- **69.84** Mean Age (years)
- **3.64** Mean Comorbidity Burden (CCI)

RESULTS

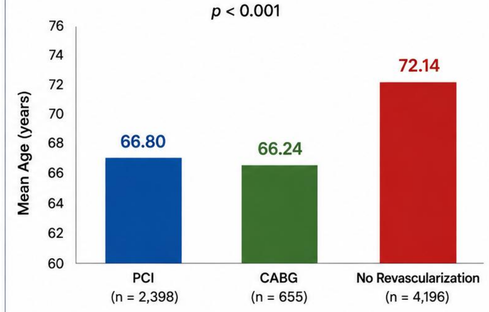
Of all **7,249** MPN patients admitted with NSTEMI (2016–2022)

1. REVASCULARIZATION STRATEGY



Total N = 7,249

2. MEAN AGE BY REVASCULARIZATION STRATEGY

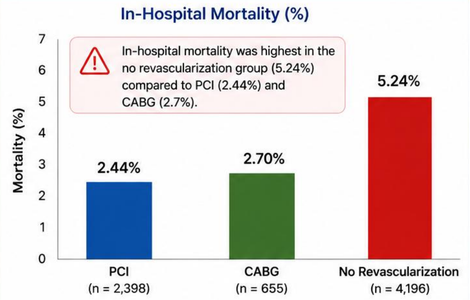


Patients without revascularization were the oldest (mean age 72.14 years) compared to PCI (66.80 years) and CABG (66.24 years); $p < 0.001$.

RESULTS (OUTCOMES)

Of all **7,249** MPN patients admitted with NSTEMI (2016–2022)

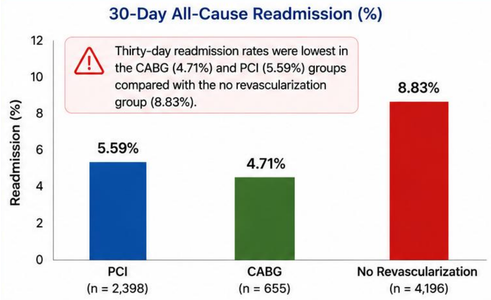
1. IN-HOSPITAL MORTALITY



Adjusted Odds of In-Hospital Mortality	
PCI vs No Revascularization	CABG vs No Revascularization
aOR 0.63 (95% CI 0.42 – 0.95)	aOR 0.74 (95% CI 0.35 – 1.55)
$p = 0.026$	$p = 0.418$

aOR = adjusted Odds Ratio; CI = Confidence Interval

2. 30-DAY ALL-CAUSE READMISSION



Adjusted Hazard Ratio (Cox Model) for 30-Day Readmission	
PCI vs No Revascularization	CABG vs No Revascularization
aHR 0.73 (95% CI 0.54 – 0.99)	aHR 0.62 (95% CI 0.37 – 1.05)
$p = 0.041$	$p = 0.073$

aHR = adjusted Hazard Ratio; CI = Confidence Interval

PCI was associated with significantly lower odds of in-hospital mortality and lower hazard of 30-day readmission compared with no revascularization, while CABG showed non-significant associations.

ACKNOWLEDGEMENTS

We are thankful to HCUP, AHRQ, and partners for the data.

REFERENCES

https://hcup-us.ahrq.gov/db/nation/nis/nisdbdocumentation.jsp